AMENDMENT TO THE CLAIMS

Please cancel claims 1-4 without prejudice, and add new claims 5-24 as follows:

1-4. Canceled without prejudice.

5. (New)   A system adapted to monitor contamination incidents in a product distribution chain, the system comprising:

> a product distribution database containing distribution data related to a flow of products in commerce; and

> a modeling system adapted to model an evolving contamination incident according to the distribution data in the product distribution database.

6. (New)   The system of claim 5 and further comprising:

> an on-call product tracking system adapted to identify a probable source of a particular contamination incident based on chronological and geographical correlations between identified contamination incidents and the product distribution data.

7. (New)   The system of claim 5 wherein the product is a fresh produce item.

8. (New)   The system of claim 7 wherein the fresh produce items are potatoes, head lettuce, or onions.

9. (New)   The system of claim 5 wherein the product is pasteurized milk.

10. (New) The system of claim 5 wherein the product distribution data includes data related to a volume of product at each point within a distribution chain at each hour after the product is produced.

11. (New) A method for modeling a product contamination incident, the method comprising:

        receiving a product type to be modeled, the product type associated with product distribution data stored in a distribution database;

        receiving a response time value related to an expected amount of time before a health department is made aware of the contamination incident; and

        modeling statistically the product contamination incident as an evolving contamination event.

12. (New) The method of claim 11 wherein the step of receiving the product type comprises:

        providing a user interface that is linked to the distribution database, the user interface adapted to receive the product type.

13. (New) The method of claim 11 wherein the step of receiving the response time comprises:

        providing a user interface that is linked to the distribution database, the user interface adapted to receive the response time.

14. (New) The method of claim 13, wherein the response times are slow response, normal response, or fast response.

15. (New) The method of claim 13 wherein the response time is a numeric value representative of a unit of time.

16. (New) The method of claim 13 wherein the response time is a value entered by a user that is representative of a unit of time.

17. (New) The method of claim 11 wherein before the step of receiving, the method further comprising:

        compiling a distribution profile corresponding to a

flow of a product over time within a stream of commerce, each product having an associated distribution profile; and

storing each distribution profile according to its product type within the distribution database.

18. (New) The method of claim 11 and further comprising:

offering context-based intervention options for responding to the evolving contamination event.

19. (New) The method of claim 18 wherein the intervention options are based on available information and a volume of product at each stage of a distribution chain according the evolving contamination event.

20. (New) The method of claim 18 and further comprising:

aggregating an estimated health cost associated with the evolving contamination incident.

21. (New) The method of claim 20 and further comprising:

providing a user interface adapted display the intervention options and to receive a user selection from the displayed intervention options; and

mitigating the health cost based on the user selection.

22. (New) The method of claim 11 wherein the step of modeling comprises:

calculating over time a probable distribution of product within a stream of commerce based on information stored in the product distribution database;

estimating a probable distribution of contamination incidents based on the calculated distribution of product;

estimating a time at which health officials become

aware of the contamination incident based on the response time value; and

calculating over time a probable health cost associated with the contamination event beginning at the time at which health officials become aware of the contamination incident.

23. (New) A system adapted to model a product contamination incident, the system comprising:

a product distribution database containing distribution data related to a flow of products in a stream of commerce, the distribution data being related to particular products;

a modeling software system adapted to receive a selected contamination type and to model a probable contamination incident distribution within the stream of commerce based on the distribution data and based on the selected contamination type; and

a user interface adapted to display the distribution data to provide user interaction options to a user.

24. (New) The system of claim 23 and further comprising:

a food tracking system adapted to identify a source for a contaminated product, the food tracking system adapted to relate geographically related contamination events to specific suppliers of the product within a geographic area of the contamination event; and

a trace system adapted to trace a product within a product distribution chain, the trace system adapted to link a contaminated product with a source and adapted to track all contaminated products deriving from the source.